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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/611,692 | 07/01/2003 | Neal Kenneth Jacobs | PU030182 | 4429 |
| 24498 | 7590 | 02/15/2006 | EXAMINER | |
| THOMSON LICENSING INC. PATENT OPERATIONS PO BOX 5312 PRINCETON, NJ 08543-5312 | | | HAN, JASON | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2875 | |

DATE MAILED: 02/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/611,692

Applicant(s)

JACOBS ET AL.

Examiner

Jason M. Han

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed November 30, 2005 have been fully considered but they are not persuasive. The Applicant consistently and mainly argues, "the flexible wiring trace is positioned on a top surface of the circuit board instead of a keypad" [underline added for emphasis], which Applicant believes would render patentability over the prior art of record. However, the claims as stated by the Applicant fail to cite such a limitation and are considered insufficient to read over the prior art of record. At present, the prior art of record remains commensurate to the scope of the claims as broadly interpreted by the Examiner [MPEP 2111].

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 12, 17, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuzma (U.S. Patent 5130897).
3. With regards to Claim 12, Kuzma discloses an electronic device including:
 - A housing [Figure 1: (10)];
 - A circuit board [Figure 1: (60)] having at least one surface mounted light emitting diode [Figure 4: (400); Column 3, Lines 53-54];

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- A keypad [Figure 1: (30, 40, 50)] having a base [Figure 1: (40)] positioned on a top surface of the circuit board, whereby the base has a plurality of buttons [Figure 1: (310)] extending away from the circuit board, and at least one slot [Figure 1] corresponding to the at least one surface mounted light emitting diode; and
 - A light pipe [Figure 1: (20)] having openings [Figure 1: (210)] corresponding to the buttons of the keypad, whereby the light pipe is positioned on the keypad such that buttons extend through the openings therein so that light is dispersed through the light pipe to the buttons.
4. With regards to Claim 17, Kuzma discloses the light emitting diodes being arranged along a longitudinal axis of the circuit board [Figure 1].
5. With regards to Claim 20, Kuzma discloses the light pipe having at least one light dispersing slot [Figure 2: (230)] corresponding to the at least one surface mounted light emitting diode.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzma (U.S. Patent 5130897) in view of Park (U.S. Patent 5568367).

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7. With regards to Claim 1, Kuzma discloses an electronic device with back lighting including:

- A housing with a top cover [Figure 1: (10)] having a plurality of apertures [Figure 1: (110)];
- A circuit board [Figure 1: (60)] having a light emitting diode [Figures 1, 4: (400); Column 3, Lines 53-54];
- A keypad [Figure 1: (30, 40)] having a base [Figure 1: (40)] with a plurality of buttons [Figure 1: (310)] extending through the apertures of the top cover; and
- A light pipe [Figure 1: (20)] positioned on a top surface of the keypad between the top cover of the housing and the keypad so that light is dispersed through the light pipe to the buttons.

Kuzma does not specifically teach the housing further including a bottom cover.

Park teaches a remote control device including an aesthetically pleasing housing with top and bottom covers [Figures 3-4: (10, 14)] incorporating multiple electrical and optical components therein.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the electronic device of Kuzma to incorporate the housing with top and bottom covers of Park, so as to ensure protection for the various inside components and improve aesthetics.

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8. With regards to Claim 2, Kuzma in view of Park discloses the claimed invention as cited above. In addition, Kuzma teaches the keypad [Figure 1: (40)] having at least one slot corresponding to the light emitting diode.

9. With regards to Claim 3, Kuzma in view of Park discloses the claimed invention as cited above. In addition, Kuzma teaches the light emitting diode being surface mounted to the circuit board [Figure 1; Column 3, Lines 53-54].

10. With regards to Claim 4, Kuzma in view of Park discloses the claimed invention as cited above. In addition, Kuzma teaches the light pipe [Figure 2: (20)] having openings [Figure 2: (210)] corresponding to the buttons of the keypad for receiving the buttons therein.

11. With regards to Claim 9, Kuzma in view of Park discloses the claimed invention as cited above. In addition, Kuzma teaches the light pipe having at least one light dispersing slot [Figure 2: (230)] corresponding to the at least one surface mounted light emitting diode.

12. With regards to Claim 10, Kuzma in view of Park discloses the claimed invention as cited above. In addition, Kuzma teaches the buttons including contacts that correspond to conductive contacts [Figure 1: (510)] such that when the buttons are pushed toward the circuit board, the contacts contact the conductive contacts to make an electrical connection, but does not specifically teach the conductive contacts being on the circuit board.

Park teaches a circuit board including in combination light emitting diodes [Figure 4: (21)] and conductive contacts [Figure 4: (32)] corresponding to buttons on a keypad [Figure 4: (40)].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the electronic device of Kuzma to incorporate the circuit board combination with LEDs and conductive contacts, as taught by Park, so as to provide a more robust device via a single unitary structure providing support for said LEDs and contacts, and thus, simplifying manufacturing.

13. With regards to Claim 11, Kuzma in view of Park discloses the claimed invention as cited above, but does not specifically teach the light pipe being the same size as the keypad. However, it would have been an obvious matter of design choice to incorporate the light pipe to be the same size as the keypad, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). In this case, making the light pipe the same size as the keypad could provide a more compact device and simplify manufacturing via the components neatly overlapping one another.

14. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzma (U.S. Patent 5130897) in view of Park (U.S. Patent 5568367) as applied to Claim 1 above, and further in view of Kuhfus (U.S. Patent 4349705).

Kuzma in view of Park discloses the claimed invention as cited above, but does not specifically teach the top cover including dividers extending from an inside surface

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of the top cover toward the base of the keypad that are arranged to receive the buttons therebetween (re: Claim 5); said dividers contacting the light pipe (re: Claim 6); said dividers contacting the base of the keypad through cut-outs in the light pipe (re: Claim 7); nor teaches said dividers contacting the base of the keypad (re: Claim 8).

Kuhfus teaches, "Various ways of holding the assembly together can be used. As an example, protrusions (dividers) molded on the back or under surface of the bezel 30 (top cover) can be passed through holes in the other members and the protrusions molded over on the back or undersurface of the PCB 10 [Column 2, Lines 7-11; underlines added by examiner]." It is an obvious teaching that said protrusions/dividers of the bezel could contact the light pipe, the base of the keypad through cut-outs in the light pipe, and the base of the keypad.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the electronic device of Kuzma in view of Park to incorporate the dividers of Kuhfus to facilitate a strong attachment/holding means for the assembly, as corroborated by Kuhfus.

15. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzma (U.S. Patent 5130897) as applied to Claim 12 above, and further in view of Kuhfus (U.S. Patent 4349705).

Kuzma discloses the claimed invention as cited above. In addition, Kuzma teaches the housing including a top cover [Figure 1: (10)] having a plurality of apertures [Figure 1: (110)], but does not specifically teach the top cover including dividers extending from an inside surface of the top cover toward the base of the keypad that are

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arranged to receive the buttons therebetween (re: Claim 13); said dividers contacting the light pipe (re: Claim 14); said dividers contacting the base of the keypad through cut-outs in the light pipe (re: Claim 15); nor teaches said dividers contacting the keypad (re: Claim 16).

Kuhfus teaches, "Various ways of holding the assembly together can be used. As an example, protrusions (dividers) molded on the back or under surface of the bezel 30 (top cover) can be passed through holes in the other members and the protrusions molded over on the back or undersurface of the PCB 10 [Column 2, Lines 7-11; underlines added by examiner]." It is an obvious teaching that said protrusions/dividers of the bezel could contact the light pipe, the base of the keypad through cut-outs in the light pipe, and the base of the keypad.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the electronic device of Kuzma to incorporate the dividers of Kuhfus to facilitate a strong attachment/holding means for the assembly, as corroborated by Kuhfus.

16. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzma (U.S. Patent 5130897).

Kuzma discloses the claimed invention as cited above, but does not specifically teach the light pipe being the same size as the keypad. However, it would have been an obvious matter of design choice to incorporate the light pipe to be the same size as the keypad, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of

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ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). In this case, making the light pipe the same size as the keypad could provide a more compact device and simplify manufacturing via the components neatly overlapping one another.

17. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzma (U.S. Patent 5130897) as applied to Claim 12 above, and further in view of Park (U.S. Patent 5568367).

Kuzma discloses the claimed invention as cited above. In addition, Kuzma teaches the buttons including contacts that correspond to conductive contacts [Figure 1: (510)] such that when the buttons are pushed toward the circuit board, the contacts contact the conductive contacts to make an electrical connection, but does not specifically teach the conductive contacts being on the circuit board.

Park teaches a circuit board including in combination light emitting diodes [Figure 4: (21) and conductive contacts [Figure 4: (32)] corresponding to buttons on a keypad [Figure 4: (40)].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the electronic device of Kuzma to incorporate the circuit board combination with LEDs and conductive contacts, as taught by Park, so as to provide a more robust device via a single unitary structure providing support for said LEDs and contacts, and thus, simplifying manufacturing.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason M Han

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Examiner
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JMH (2/13/2006)


ALAN CARIASO
PRIMARY EXAMINER